UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,095	03/01/2002	Hideaki Ono	FUJZ 19.484	1978

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EXAMINER
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ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/087,095	ONO ET AL.
	Examiner	Art Unit	
	Salad E Abdullahi	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 March 2002</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-16</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/16/2005</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This application has been reviewed. Original claims 1-16 are pending. The

rejection cited stated below.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-9, 11-15 and 17 are rejected under 35 U.S.C. 102(e) as being

anticipated by Rajahalme U.S. Patent Application Publication No. 2004/0141603 A1.

As per claim 1, Rajahalme discloses a load balancer (see fig. 1, element 5 and

paragraph 0043) comprising:

means for extracting identifying information specific to a mobile IP terminal from an

arrival packet(see fig. 1 and paragraph 0041); and

means for determining a destination server to be connected based on the identifying

information (see fig. 1 and paragraph 0041).

As per claim 2, Rajahalme discloses the load balancer as claimed in claim 1 wherein

the identifying information comprises a home address included in a destination option

header of the packet(see paragraph 0034).

As per claim 3, the load balancer as claimed in claim 1 wherein the identifying

information is prescribed in predetermined lower bits of a source address of a packet

utilizing a stateless address configuration method (the identification information to be

prescribed in the lower bit of source address of Rajahalme is inherent since Rajahalme

uses the source address to select the destination server, see also paragraph 0023).

As per claim 4, Rajahalme discloses the load balancer as claimed in claim 1 wherein

the identifying information comprises a security parameter index of the packet if

encrypted (see paragraph 0020).

As per claim 5, Rajahalme discloses a load balancer comprising:

means for requesting a home agent to notify a change of a care-of address when the

care-of address of a terminal has changed upon an arrival of a first packet addressed to

a server (see paragraphs 041 and 0047-048); and

means for determining a destination server to be connected by regarding the notified

care-of address as identifying information (see paragraphs 0047-048).

As per claim 6, Rajahalme discloses a load balancer (see fig. 1, element 5 and

paragraph 0043) comprising:

means for requesting a terminal to notify a change of a care-of address when the care-

of address of the terminal has changed upon an arrival of a first packet addressed to a

server(see paragraphs 041 and 0047-048);and

means for determining a destination server to be connected by regarding the notified

care-of address as identifying information (see paragraphs 041 and 0047-048).

As per claim 7, Rajahalme discloses the load balancer as claimed in claim 2 wherein

when the extracting means extract a packet transmitted from a home link upon an

arrival of the packet and the packet does not have the destination option header, the

determining means determine the destination server by regarding a source address of

the packet as the identifying information (see paragraphs 0023).

As per claim 8, Rajahalme discloses the load balancer as claimed in claim 1 wherein

the determining means are provided with a table for storing an address of the

destination server having a source address associated with the care-of address as a

retrieval key, thereby determining the destination server using the source address of the

arrival packet(see paragraphs 0023).

As per claim 9, Rajahalme discloses the load balancer as claimed in claim 5 wherein

the determining means are provided with a table (inherent) for storing an address of the

destination server having a source address associated with the care-of address as a

retrieval key, thereby determining the destination server using the source address of the

arrival packet, and the table prepares an entry with a new care-of address as a retrieval

key when the new care-of address has been notified, and stores, as storing data, an

address of the destination server stored as data of an entry of an old care-of address

(see paragraphs 0023 and 0047).

As per claim 11, Rajahalme discloses the load balancer as claimed in claim 1 wherein a home agent of a mobile IP terminal as a substitute for the server is made a destination to be connected (see paragraph 0045).

As per claim 12, Rajahalme discloses a home agent (see fig. 1, element 2) which notifies, according to a request from a load balancer, binding cache information managed by the home agent itself to the load balancer periodically or when triggered in operation by a change of a care-of address of a mobile IP terminal (see paragraph 0041).

As per claim 13, Rajahalme discloses a mobile IP terminal (see fig. 1, element 1) which notifies, according to a request from a load balancer, binding cache information managed by the mobile IP terminal itself to the load balancer periodically or when triggered in operation by a change of a care-of address of the mobile IP terminal itself (see paragraph 0034).

As per claim 14, Rajahalme discloses the load balancer as claimed in claim 7 wherein the determining means are provided with a table for storing an address of the destination server having a source address associated with the care-of address as a retrieval key, thereby determining the destination server using the source address of the arrival packet(see paragraphs 0023 and 0047).

As per claim 15, Rajahalme discloses the load balancer as claimed in claim 6 wherein

the determining means are provided with a table(inherent)for storing an address of the

destination server having a source address associated with the care-of address as a

retrieval key, thereby determining the destination server using the source address of the

arrival packet, and the table prepares an entry with a new care-of address as a retrieval

key when the new care-of address has been notified, and stores, as storing data, an

address of the destination server stored as data of an entry of an old care-of

address(see paragraphs 0023 and 0047).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rajahalme as applied to claim further in view of Luke et al., U.S. Patent publication

No. 2004/0133634[hereinafter Luke].

As claims 10 and 16, Rajahalme discloses substantial features of the claimed invention

as discussed above with respect to claim 1,

 Rajahalme is silent regarding: wherein the determining means store a lifetime in the

data of the entry, periodically decrement the lifetime, update the lifetime every time a

packet using the entry has arrived, and invalidate the entry upon expiration of the

lifetime.

Luke, discloses a time period based flow load balancing including the step of wherein

the determining means store a lifetime in the data of the entry, periodically decrement

the lifetime, update the lifetime every time a packet using the entry has arrived, and

invalidate the entry upon expiration of the lifetime (see paragraph 0237, 0404 and

0543). Therefore, it would have been obvious to one having ordinary skill in the art at

the time of the invention to incorporate the teaching of Luke into the system of

Rajahalme such that once the period of time for an IP address has expired an updated

balance decision can be made in the background and a new balanced server target be

selected.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure.

8.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Salad E Abdullahi whose telephone number is 571-272-
4009. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the
examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can
be reached on 571-272-4001. The fax phone number for the organization where this
application or proceeding is assigned is 703-872-9306.

9.   Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

Abdullahi salad
3/15/2005